

**Paper reference 31760H**  
**Pearson BTEC Level 3**  
**Nationals Extended Certificate,**  
**Foundation Diploma,**  
**Diploma, Extended Diploma**

**Total Marks**

**Information Technology**  
**UNIT 1: Information Technology**  
**Systems**

**Time: 2 hours**

**In the boxes below, write your name, centre number  
and learner registration number.**

<b>Surname</b>						
<b>Other names</b>						
<b>Centre Number</b>						
<b>Learner Registration Number</b>						

**YOU MUST HAVE  
Nil.**

**YOU WILL BE GIVEN  
Data Book.**

### **INSTRUCTIONS**

- **Answer ALL questions.**
- **Answer the questions in the spaces provided in this Question Paper or in the Data Book – there may be more space than you need.**

### **INFORMATION**

- **The total mark for this paper is 90.**
- **The marks for EACH question are shown in brackets**  
– use this as a guide as to how much time to spend on each question.
- **There may be spare copies of some diagrams.**

## ADVICE

- **Read each question carefully before you start to answer it.**
  - **Try to answer every question.**
  - **Check your answers if you have time at the end.**
-

**ANSWER ALL QUESTIONS.**

**WRITE YOUR ANSWERS IN THE SPACES PROVIDED.**

- 1. David is a wedding photographer who takes and edits photographs.**

**He uses several portable devices including a digital camera, tablet, mobile phone and laptop.**

**David uses cloud storage for his photographs so that he can access his photographs anywhere with an internet connection.**

- (a) Identify TWO OTHER reasons why David uses cloud storage for his photographs  
(2 marks)**

**Answer space continues on the next page**

**REASON 1**

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**Question 1 (a) continued**

**REASON 2** \_\_\_\_\_

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**(continued on the next page)**

**Question 1 continued**

**David is concerned that he will not be able to access his photographs if there is no internet connection.**

- (b) Identify TWO OTHER concerns David may have about using cloud storage.  
(2 marks)**

**CONCERN 1** \_\_\_\_\_

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**CONCERN 2** \_\_\_\_\_

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**(continued on the next page)**

**Turn over**

**Question 1 continued**

- (c) Look at the text message for Question 1 (c)  
in the separate Data Book.**

**David has received the text message that he  
believes is an attempt at SMS phishing.**

- (i) Identify TWO reasons that may have led  
David to believe that this is a phishing text.  
(2 marks)**

**REASON 1**

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**REASON 2**

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**Turn over**

**Question 1 (c) continued**

- (ii) Identify TWO ways that David can protect himself against phishing texts.  
**(2 marks)**

**WAY 1**

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**WAY 2**

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**Question 1 continued**

- (d) David wants to set up a blog to share his portfolio of wedding photographs.
- (i) Describe the process David needs to follow for setting up the blog to share his portfolio of wedding photographs.  
**(4 marks)**

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**10**

**Question 1 (d) (i) continued**

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**Turn over**

**Question 1 (d) continued**

- (ii) Explain TWO benefits to David of using  
a blog to show the wedding photographs.  
(4 marks)**

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**BENEFIT 1**

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**Question 1 (d) (ii) continued**

**BENEFIT 2** \_\_\_\_\_

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**Question 1 continued**

**Using a blog is one way David can communicate and interact with online communities.**

- (e) Discuss the features of other relevant platforms he could use to upload and show his wedding photographs.**  
**(8 marks)**

**Answer space continues on the next 2 pages**

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## **Question 1 (e) continued**

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**Question 1 (e) continued**

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**(Total for Question 1 = 24 marks)**

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- 2. Jamal is the manager of a sports centre, which currently offers training facilities for a variety of sports.**

**Jamal wants to ensure that the centre is meeting the needs of the local community.**

**He has decided to gather the opinions of the local community by collecting data from individuals.**

- (a) Explain TWO benefits of using primary data to gather the opinions of the local community.  
(4 marks)**

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**BENEFIT 1**

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**Question 2 (a) continued**

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**BENEFIT 2** \_\_\_\_\_

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**Question 2 continued**

- (b) Jamal has decided to collect some of the data using a questionnaire.**

**Look at Figure 1 for Question 2 (b)  
in the separate Data Book.**

**Figure 1 shows part of the questionnaire.**

**The questionnaire includes multiple-choice  
and open response questions.**

- (i) Give TWO reasons for using  
multiple – choice questions in a  
questionnaire.  
(2 marks)**

**Answer space continues on the next page**

**REASON 1**

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**Question 2 (b) (i) continued**

**REASON 2**

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**Question 2 (b) continued**

**(ii) Describe how open question responses  
are extracted to present findings.**

**(2 marks)**

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**Question 2 continued**

- (c) Jamal has decided to use online questionnaires rather than hard copies.**

**Explain TWO benefits to Jamal of gathering data using online questionnaires rather than hard copy questionnaires.**

**(4 marks)**

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**BENEFIT 1**

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## **Question 2 (c) continued**

## BENEFIT 2

**(continued on the next page)**

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**Question 2 continued**

- (d) Jamal uses questionnaires to collect data from the community.**

**Explain ONE OTHER method that Jamal could use to collect data from the community.**

**(2 marks)**

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**(continued on the next page)**

**Question 2 continued**

**(e) Jamal needs to post his questionnaire online.**

**Discuss the factors, other than question types, that Jamal should consider when producing the user interface for his questionnaire.**

**(8 marks)**

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**Question 2 (e) continued**

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**Turn over**

**Question 2 (e) continued**

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**(Total for Question 2 = 22 marks)**

**3. GFC designs and sells computing hardware and software via high street stores.**

**The company holds stock in each store with additional stock held in a central warehouse.**

**In-store stock levels are recorded on a database on the in-store server.**

**Warehouse stock levels are recorded on a database on the company server.**

**A sales terminal is connected to the in-store local area network (LAN).**

**The in-store LAN uses the company virtual private network (VPN) to access the company server.**

**When an item is requested the in-store stock levels are checked.**

**If the item is not available in-store, stock is checked on the warehouse database.**

**The status of the stock is sent back to the sales terminal.**

**(continued on the next page)**

**Question 3 continued**

**(a) On the blank space provided for Question 3 (a) in the separate Data Book, draw a diagram to show the integration of systems used in this process.**

**The diagram should include:**

- devices, systems and connections that could be used**
- the flow of data through the system**
- annotations indicating data, devices, systems and connections.**

**(6 marks)**

**(continued on the next page)**

**Question 3 continued**

**(b) GFC employs support staff who work remotely.**

**The support staff use the company VPN  
to access the company server.**

**Describe how the VPN works to enable the  
support staff to send files to the company server.  
(4 marks)**

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**Question 3 (b) continued**

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**(continued on the next page)**

**Question 3 continued**

- (c) Staff who work remotely must take steps to ensure the security of company data on their devices.**

**One precaution is to install a firewall on the device.**

**Describe how a firewall ensures the security of data on a device.**

**(4 marks)**

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**Question 3 (c) continued**

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**(continued on the next page)**

**Question 3 continued**

- (d) GFC keeps up to date with emerging technologies and wants to introduce robots in its warehouse.**

**Discuss the implications for GFC of using robots in the warehouse.**

**(8 marks)**

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**Question 3 (d) continued**

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**Turn over**

**Question 3 (d) continued**

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**(Total for Question 3 = 22 marks)**

**4 LN – Educ is a UK charitable organisation providing teaching resources for schools.**

**It wants to offer new online resources that include courses and teaching materials.**

**LN – Educ's website will provide access for students to use and interact with the new online resources.**

**The organisation is aware that security of data is important, but there are other implications to consider.**

**(a) Discuss the impact and implications, other than security, that the organisation should consider so students can access and use the new online resources.**

**(10 marks)**

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**Question 4 (a) continued**

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**Question 4 (a) continued**

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**Question 4 (a) continued**

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**(continued on the next page)**

**Question 4 continued**

**(b) LN – Educ does not charge for the courses and is keen to attract students from overseas.**

**However, the organisation is aware that not all overseas students will be able to take advantage of the courses.**

**Analyse the moral and ethical factors that may restrict access to the courses, and the implications of this for overseas students.**

**You should consider:**

- **globalisation**
  - **freedom of speech and censorship**
  - **unequal access to information technology.**
- (12 marks)**

**Answer space continues on the next 4 pages**

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## **Question 4 (b) continued**

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## **Question 4 (b) continued**

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## **Question 4 (b) continued**

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**Question 4 (b) continued**

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**(Total for Question 4 = 22 marks)**

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**TOTAL FOR PAPER = 90 MARKS**

**END OF PAPER**

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